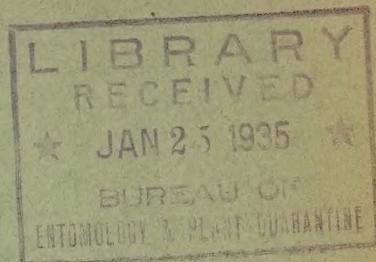


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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
INSECTICIDE DIVISION

Patent List No. 39



A LIST OF
UNITED STATES PATENTS
Issued from 1917 to 1933 inclusive
relating to
APPARATUS FOR WASHING INSECTICIDE RESIDUES
FROM FRUITS AND VEGETABLES
PART IV CONVEYING BRUSH WASHERS

Compiled by

R. C. Roark

Washington, D. C.
November, 1934.

A LIST OF UNITED STATES PATENTS ISSUED FROM 1917 TO 1933, INCLUSIVE,
RELATING TO APPARATUS FOR WASHING INSECTICIDE RESIDUES FROM FRUITS AND VEGETABLES.

Compiled by

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Insecticide Division, Bureau of Entomology and Plant Quarantine.

The sixty-six patents in this list describe processes and apparatus for removing spray residues from fruits or vegetables, machines for washing or scrubbing fruits or vegetables, machines for treating fruit with decay inhibiting solutions such as borax, brush roll machines for applying a waxy preservative coating to fruits, machines for removing foreign material from fruits, vegetables and grains, for grading peas and beans, for applying a preservative coating of hydrated cellulose (xanthate cellulose) to fruit and for washing peels from fruits previously treated with lye. A conveyer of the type used in fruit processing machines is described.

Every effort has been made by the compiler to make this list of patents complete and no discrimination is intended against any patent mention of which is inadvertently omitted.

The Department of Agriculture assumes no responsibility for the merits or workableness of any of the patents, nor does it recommend any of the inventions mentioned.

1,222,003 (Apr. 10, 1917; appl. Nov. 15, 1915). DEVICE FOR STRIPPING THE LEAVES FROM FRUIT. Charles E. Lannin, Old Mission, Mich. - This device blows the leaves from fruit, particularly cherries, by an air blast.

1,296,383 (Mar. 4, 1919; appl. Mar. 13, 1916). TRASH-SEPARATOR FOR BEETS AND BEET-TAILINGS. Charles R. Grey, Billings, Mont. - This machine removes twigs, leaves, and other trash from vegetables, especially sugar beets.

1,320,983 (Nov. 4, 1919; appl. June 23, 1919). MACHINE FOR CLEANING VEGETABLES. Raymond J. Brenckle, Millvale, Pa. - A vegetable cleaner comprises the combination of a receptacle for containing water, a pair of parallel brushes arranged therein, means for rotating said brushes in opposite direction, and a hinged splasher-plate along the side of said receptacle, and extending at an angle inwardly over the same.

1,356,049 (Oct. 19, 1920; appl. Mar. 24, 1919). BEAN-CLEANING APPARATUS. Loyd C. Dibert, San Francisco, Calif. - A bean-cleaning apparatus comprises a screen-carrier to which the beans are fed and by which they are advanced; means for directing sprays of water upon said beans while on the carrier, to separate and screen out the water-soluble particles; means for subjecting the beans after leaving the carrier to the drying action of air; and means for polishing the beans as they are being dried.

1,356,777 (Oct. 26, 1920; appl. June 28, 1920). GRAIN-CLEANER. Christoph Mettler, Sr., Menno, S. Dak. - This device cleans, cools and dries grains by air blasts.

1,390,268 (Sept. 13, 1921; appl. Dec. 16, 1920). COMBINED FRUIT WASHER AND SCALDER. William A. Beckett, Kingsville, Ontario, Canada - This device agitates a body of water so as to cause the individual fruit, e. g. tomatoes, to be rolled one against the other thereby producing sufficient surface friction to remove soluble foreign matter attaching to the exterior.

1,428,093 (Sept. 5, 1922; appl. July 12, 1921). GRAIN CLEANING MACHINE. Francis W. Humphries and Lorne E. Mackenzie, Carman, Manitoba, Canada - This machine cleans grain by the action of a suction blast after foreign substances such as straw and pebbles have been removed.

1,441,296 (Jan. 9, 1923; appl. Sept. 10, 1919). GRAIN CLEANER. Robert H. Owen, Butte, Mont. - E. F. Maginn and M. H. Gleason, Butte, Mont. - This device uses air pressure to clean grain.

1,450,866 (Apr. 3, 1923; appl. Aug. 8, 1918). METHOD OF PREPARING FRUITS AND VEGETABLES FOR SHIPMENT. Thomas J. Peters, Peters, Fla. - Fruit is washed, for from 15 to 90 seconds prior to shipment, in a tank of water, preferably at a temperature of 125° F. for tomatoes and peaches and 125 to 130° F. for citrus fruit. This process kills all insects and insect eggs and also destroys fungi.

1,467,355 (Sept. 11, 1923; appl. Mar. 8, 1921). APPARATUS FOR WASHING AND WET SCREENING. Niels C. Christensen, Salt Lake City, Utah - A spray for washing fruit or grain on a screen is produced by rapidly rotating a horizontal cylinder in contact with the surface of a body of water.

1,470,732 (Oct. 16, 1923; appl. May 11, 1922). APPARATUS FOR TREATING FRUIT AND THE LIKE. Albert Haworth, Winter Haven, Fla. - Brogdex Co., Winter Haven, Fla. - A coating of a mixture comprising a waxy material such as paraffin with a liquid vehicle such as a petroleum distillate is applied to citrus fruit by means of inclined parallel brush-rolls.

1,477,854 (Dec. 18, 1923; appl. June 13, 1922). WASHING MACHINE. Aron Tauscher, Brooklyn, N. Y. - A machine for washing vegetables such as potatoes comprises an open tank and a foraminous cage rotatable therein.

1,506,718 (Aug. 26, 1924; appl. June 7, 1923). APPARATUS FOR TREATING FRUIT AND THE LIKE. Homer C. Ricketts, Winter Haven, Fla. - Brogdex Co., Winter Haven, Fla. - Citrus fruit carried on a traveling belt is coated by means of a brush roll with a composition consisting of a waxy substance such as paraffin wax with a liquid vehicle of oily character, volatile or non-volatile, such as gasoline, benzine, "white oils", medicinal oils and the like.

1,528,132 (Mar. 3, 1925; appl. May 8, 1924). RAISIN CLEANER AND CAPPER. David W. Ripley, Fresno, Calif. - Sun-Maid Raisin Growers Assoc., Fresno, Calif. - This device washes raisins in a wire screen cylinder by means of a spray of water.

1,529,461 (Mar. 10, 1925; appl. Aug. 13, 1923). ART OF PREPARING FRESH FRUIT FOR MARKET. Ernest M. Brogden, Santa Monica, and Miles L. Trowbridge, Palms, Calif. - Citrus fruit is soaked in a tank of 10 to 15 percent borax solution at 115 to 120° F., then carried to a fruit washer of the cylindrical brush roll type where it is sprayed with borax solution after which it is dried and polished and a waxy coating applied. A satisfactory coating mixture consists of a 1 part of paraffin wax and 2 parts of a highly refined white mineral oil of about .840 sp. gr., viscosity of 70 - 73 seconds at 100° F., a flash point of 340 - 350° F., and a boiling range approximating 600 to 745° F.

1,537,596 (May 12, 1925; appl. Oct. 4, 1922). FRUIT-POLISHING MACHINE. Carol Floyd, Orlando, Fla. - A citrus fruit polishing machine has a brush for acting on the fruit, and means for supporting blocks of paraffin in position to directly contact with the brush to be transferred to the fruit by said brush.

1,540,791 (June 9, 1925; appl. June 10, 1922; renewed Feb. 9, 1925). MACHINE FOR APPLYING A LIQUID COATING OR PRESERVATIVE TO THE SKIN OF FRUIT. Red DeO. McDill, Cienfuegos, Cuba - A machine for applying a preservative liquid coating to fruit, consists of a tank adapted to contain a suitable water repelling liquid coating, an absorbent fabric belt, means for driving the belt, and means for agitating the liquid coating in the tank, aforesaid belt being suitably arranged to contact with and supply the preservative coating to the fruit.

1,585,370 (May 18, 1926; appl. Mar. 8, 1922). PRESERVATION OF FRESH FRUIT. Ernest M. Brogden, Winter Haven, Fla. - Brogdex Co., Winter Haven, Fla. - Citrus and other fruit is coated with a waxy material such as paraffin commixed with a solvent vehicle such as gasoline, of a fairly high degree of volatility. This composition is applied by rubbing rolls which are supplied from a tank through the agency of a transfer roll.

1,587,736 (June 8, 1926; appl. Mar. 24, 1924). PARAFFIN-WAX SPRAYER. Charles E. Schenck, Clearwater, Fla. - This device sprays melted paraffin wax on to citrus fruit and vegetables by means of compressed air.

1,618,159 (Feb. 22, 1927; appl. Oct. 30, 1922). PROCESS OF AND APPARATUS FOR COATING ARTICLES. Frank Ahlborg, Los Angeles, Calif. - An apparatus for coating fruit with waxy material comprises a wick immersed in the coating material, means for rolling said articles into and out of contact with said wick, and means for rubbing the surface of said articles to distribute thereon the adhering coating material.

1,624,074 (Apr. 12, 1927; appl. Oct. 21, 1926). METHOD OF REMOVING RESIDUAL POISONS FROM FRUIT. Edward M. Sears, Yakima, Wash. - Lead arsenate spray residues is removed from fruit by dipping it first in mineral, animal or vegetable oil containing from one half of one percent to ninety-nine percent of fatty acid, or in fatty acid containing from one percent to ninety-nine percent of mineral, animal or vegetable oil, the acid rendering the oil soluble in water. The fruit is then dipped in a solution of water made alkaline with one to ten percent of soda, alkali or ammonia, after which it is washed in clear water. Suitable oils are; vegetable oils, corn oil, cottonseed oil, sulphonated oil; mineral oil - paraffin oil and crystal slab oil; animal oils - sperm oil and fish oil. Suitable fatty acids are oleic, stearic and coco fatty acids.

1,630,136 (May 24, 1927; appl. July 21, 1926). VEGETABLE WASHER. Phillip A. Ross, Bradford, Pa. - This invention provides a machine which is adapted to be operated by hand or motor including a pair of rotary brushes, means for supplying water to the brushes and a pump for using the water over and over.

1,632,142 (June 14, 1927; appl. May 25, 1925). A VEGETABLE CLEANER. Henry W. Meyer, Indianapolis, Ind. - A vegetable cleaner includes a framework having a lateral aperture therein and a pair of oppositely rotating scrubbing rolls with their axes parallel to each other. This machine is an improvement over the one described in U. S. patent 1,495,758 issued May 27, 1924 to H. W. Meyer.

1,641,112 (Aug. 30, 1927; appl. May 15, 1922). METHOD AND APPARATUS FOR TREATING FRESH FRUIT. Ernest M. Brogden, Winter Haven, Fla. - Brogdex Co., Winter Haven, Fla. - Citrus and other fruit and vegetables, after spraying with melted paraffin, are polished by a brush roller.

1,669,293 (May 8, 1928, appl. Nov. 10, 1925). PEAR-PEELING MACHINE. Clifford J. Pugh, Salem, Ore. - The loosened peels of pears are washed away by a spray of cold water.

1,671,923 (May 29, 1928; appl. Aug. 1, 1922). ART OF TREATING FRUIT AND THE LIKE. Ernest M. Brogden, Winter Haven, Fla. - Brogdex Co., Winter Haven, Fla. - Citrus fruits, apples, peaches, cantaloupes, etc., are cleaned with a non-aqueous liquid, such as kerosene or a similar petroleum fraction, which may contain paraffin wax and/or ingredients to mask the odor of the solvent and/or coloring matter. Thus 1/2 to 1 percent of amyl acetate, hexyl acetate or other ester or essential oil of pleasant odor added to kerosene is useful for modifying the odor and a small percentage of coloring matter, say 1/4 to 5 percent of dandelion oil, annatto or other butter color or harmless color may be added to tint the composition as desired.

1,671,924 (May 29, 1923; appl. July 23, 1923). ART OF HANDLING FRESH FRUITS. Ernest M. Brogden, Santa Monica, Calif. - Brogdex Co., Winter Haven, Fla. - A process of treating fresh fruit comprises directing an atomized mixture comprising waxy material and a solvent thereof into contact with the fruit, rubbing the fruit to distribute said mixture uniformly there-over in a thin protective film, and removing at least part of said solvent from said film by an evaporating treatment. Refined light mineral oil is a suitable solvent and not more than 5 to 10 pounds of paraffin should be applied per each 10,000 square feet of fruit surface treated.

1,676,481 (July 10, 1928; appl. Apr. 30, 1928). CONVEYOR. John D. Crummey, William J. Austin and Frank H. Lewis, San Jose, Calif. - Bean Spray Pump Co., San Jose, Calif. - An endless conveyor for use in apparatus to remove spray residues on fruit comprises spaced parallel side chains composed of articulated links; spaced, parallel cross members connecting opposing corresponding links; and a rubber cushion sheath completely enveloping each cross member, the ends of said sheath being stretched to cover and bind upon the link and cross member connection.

1,677,229 (July 17, 1928; appl. Mar. 6, 1922; renewed Mar. 29, 1926). FRUIT-TREATING APPARATUS. Archie W. Conklin, Winter Haven, Fla. - Brogdex Co., Winter Haven, Fla. - An apparatus for applying a coating of a sealing-and water-proofing material, such as paraffin with a liquid vehicle of the type of gasoline, to citrus fruits, e. g. oranges and grapefruit, and for polishing the fruit is described.

1,680,260 (Aug. 7, 1928; appl. Nov. 26, 1921). FRUIT-TREATING APPARATUS. Ernest M. Brogden, Winter Haven, Fla. - Brogdex Co., Winter Haven Fla. - Citrus fruit is coated with a mixture of a sealing-and water-proofing material such as paraffin with a liquid vehicle such as gasoline by means of this invention which comprises the combination with fruit brushing or polishing means, and means for feeding fruit thereto, of yielding means for supplying a semi-fluid or pasty composition to the fruit substantially as it is being fed to said brushing and polishing means.

1,689,868 (Oct. 30, 1928; appl. June 17, 1925; in Germany, Oct. 9, 1924). MACHINE FOR WASHING FRUITS AND VEGETABLES. Wilhelm Fink, Bonn-on-the-Rhine, Germany. - This machine is of that type in which a sieve-trough with a rotatable wing-shaft or a rotatable sieve-drum is placed in a tank adapted to contain washing-fluid for fruits and vegetables.

1,692,286 (Nov. 20, 1928; appl. Apr. 27, 1923; renewed May 18, 1926). PROCESS AND APPARATUS FOR FORMING A PROTECTIVE AND PRESERVATIVE COATING UPON FRUIT AND THE LIKE. Ernest M. Brogden, Santa Monica, Calif. - Brogdex Co., Winter Haven, Fla. - A coating of a preservative composition consisting of a waxy material, such as paraffin wax, and a liquid vehicle of oily nature, volatile or non-volatile, such as gasoline, benzine, "white oils", medicinal oils and the like, is applied to citrus fruit by this invention which comprises, in combination, means for applying a fluent coating material to the fruit and means for directing air under pressure in sheet-like blasts against the fruit having said coating material applied thereto.

1,696,703 (Dec. 25, 1928; appl. Apr. 21, 1925). COMPOSITION FOR TREATING FRUIT. Henry G. Zellner, Fort Myers, Fla. - Zeltrocide Chemical Corp., Lakeland, Fla. - Citrus fruit is delivered to a washing tank containing soapy washing solution, then carried to scrubbing rolls where it is scrubbed and sprayed with fresh water, then carried by a roller conveyor under sprays which thoroughly spray the entire surface with a solution adapted to allay or prevent the attack of the fruit by blue mold, green mold, stem end rot, anthracnose, etc. The solution recommended is a 2 to 12 percent (preferably 6 percent) solution of the following mixture: 100 lbs. borax, 20 lbs. sodium bicarbonate and 2 lbs. potassium permanganate. After this treatment the fruit is dried and polished.

1,696,704 (Dec. 25, 1928; appl. Apr. 23, 1926). COMPOSITION FOR TREATING FRESH FRUIT AND VEGETABLES. Henry G. Zellner, Fort Myers, Fla. - Zeltrocide Chemical Corp., Lakeland, Fla. - Citrus fruit is scrubbed and then sprayed with a chemical solution to kill all germs, molds or spores and prevent blue mold, green mold, stem end rot, anthracnose, contact mold, etc. The solution recommended is a 2 to 12 percent (preferably 6 percent) solution of the following mixture: 100 lbs. borax, 20 lbs. sodium bicarbonate, 18 lbs. sodium carbonate, 2 lbs. potassium permanganate and 1 lb. 8 oz. copper sulphate.

1,700,908 (Feb. 5, 1929; appl. Feb. 23, 1922; divided and this application filed Apr. 13, 1923). PROCESS OF TREATING FRUIT AND THE LIKE. Homer C. Ricketts, Winter Haven, Fla. - Brogdex Co., Winter Haven, Fla. - Paraffin in mixture with a liquid vehicle such as gasoline or other mineral oil solvent is used in applying a preservative coating to citrus fruit.

1,703,144 (Feb. 26, 1929; appl. Aug. 30, 1923; renewed June 28, 1927). APPARATUS FOR TREATING FRUIT AND THE LIKE. Albert Haworth, Winter Haven, Fla. - Brogdex Co., Winter Haven, Fla. - Apparatus for treating fruit comprises the combination, with a rotary brush, of a holder for a slab of paraffin wax, adapted to present a face of such slab in adjustable frictional engagement with said brush, and unitary hand-operated means operable to withdraw or advance said holder bodily with respect to said brush.

1,708,330 (Apr. 9, 1929; appl. May 19, 1927). PROCESS FOR THE REMOVAL OF RESIDUAL POISONS FROM AND THE PRESERVATION OF FRUITS. Reginald H. Robinson and Henry Hartman, Corvallis, Ore. - United States Government and People of the U. S. - Deciduous fruits are washed or sprayed with a 0.3 to 2 percent solution of hydrochloric acid to remove spray residues of arsenic, lead, copper and lime, after which they are washed with water and dried. To kill spores of blue mold, gray mold, brown rot, anthracnose, perennial canker, etc., the fruits are washed in a solution of one part of formaldehyde in 50 or 160 parts of water or acid solution as the case may be.

1,708,721 (Apr. 9, 1929; appl. June 27, 1927). FRUIT AND VEGETABLE WASHING AND DRYING MACHINE. Joseph T. Evans, Boise, Idaho. - This invention provides a fruit or vegetable washing and drying apparatus wherein the fruit or vegetables are washed as they are discharged into a hopper which is subsequently rotated to dry the fruit or vegetables by centrifugal action.

1,710,682 (Apr. 30, 1929; appl. July 12, 1924; renewed Nov. 26, 1926). FRUIT-WASHING APPARATUS. Ernest M. Brogden, Santa Monica, Calif. - Brogdex Co., Winter Haven, Fla. - Apparatus for washing citrus fruit comprises a receptacle supplied with fluid, said receptacle provided with a plurality of tapering settling pockets or hoppers having imperforate walls, the bottoms of said pockets or hoppers provided with means for admitting or discharging fluid at will.

1,711,729 (May 7, 1929; appl. June 17, 1925). PROCESS FOR TREATING FRUITS, ESPECIALLY RAISINS. Thomas W. W. Forest, Oakland, Calif. - Sun Maid Raisin Growers of California, Fresno, Calif. - A process of treating dried fruit includes heating the fruit, then cooling the same, and applying an edible mineral oil to the fruit during the cooling thereof at several stages of the cooling process.

1,724,639 (Aug. 13, 1929; appl. Apr. 18, 1927). APPARATUS FOR WASHING FRUITS AND OTHER VEGETABLES. Albert Burch, Medford, Ore., and Lloyd C. White, Berkeley, Calif. - This invention relates to a machine or apparatus for washing fruits, vegetables and other products in which the product is washed by the combined action of compressed air and a liquid.

1,732,118 (Oct. 15, 1929; appl. Mar. 2, 1925). PRESERVATIVE TREATMENT OF FRESH FRUIT. Ernest M. Brogden, Santa Monica, Calif. - Brogdex Co., Winter Haven, Fla. - In the preparation of fresh fruit for market, the process of controlling blue mold decay or the like comprises subjecting fresh fruit to the action of an aqueous solution containing not less than 2 ounces of sodium hypochlorite per gallon until exposed rind tissues of the fruit are effectively impregnated therewith, said solution containing an added alkaline reagent in such quantity that the solution possesses a degree of alkalinity in excess of that due to said sodium hypochlorite equivalent to an addition of at least one ounce of sodium carbonate per gallon. The fruit may then be coated with a thin film of paraffin in white mineral oil.

1,732,816 (Oct. 22, 1929; appl. Oct. 11, 1926). METHOD OF CLEANING AND PREPARING FOR STORAGE AND MARKET, FRUIT AFTER HARVESTING. Irving F. Laucks, Harry P. Ranks, and Hugh F. Rippey, Seattle, Wash. - Laucks Laboratories, Inc., Seattle, Wash. - Fruit such as apples, pears, quinces, plums, prunes, oranges, grapefruit, lemons, etc., is washed with a 1 to 10 percent solution of trisodium phosphate to remove spray residues of lead arsenate, calcium arsenate, Bordeaux mixture, sulphur spray, mineral or vegetable oil sprays, etc. Alkaline salts of low alkalinity, e. g. sodium borate and sodium and potassium carbonates, may also be used in solutions of such strength as not to exceed the degree of alkalinity of 10 percent trisodium phosphate. In general, this would include alkaline salt solutions having a pH of not greater than 13.

1,735,748 (Nov. 12, 1929; appl. Feb. 1, 1928). VEGETABLE CONDITIONER. Jugurtha W. Glenn, Frank R. Hood, and Joseph B. Schwab, Stockton, Calif. - A semicircular inclined trough contains rotating brushes which extend the length of the trough. Vegetables moving through the trough by gravity are sprayed with water and cleaned by the brushes.

1,736,759 (Nov. 19, 1929; appl. July 23, 1923; renewed Aug. 22, 1928). FRUIT-TREATING APPARATUS. Ernest M. Brogden, Pomona, Calif. - Brogdex Co., Winter Haven Fla. - Apparatus for applying fluent waxy material to fruit comprises the combination, with a fruit-brushing machine, of an endless carrier belt adapted to convey fruit to said brushing machine, and means for applying the fluent material to said belt.

1,738,431 (Dec. 3, 1929; appl. Feb. 14, 1922; renewed May 4, 1929). APPARATUS FOR COATING ARTICLES. Charles M. Jamieson, Winter Haven, Fla. - Brogdex Co., Winter Haven, Fla. - This apparatus coats citrus fruit with a mixture of a sealing and waterproofing material such as paraffin with a volatile liquid vehicle such as gasoline.

1,754,173 (Apr. 8, 1930; appl. Dec. 21, 1926). PROCESS OF REMOVING LEAD ARSENATE FROM FRUIT. Arthur R. Maas, Los Angeles, Calif. - Lead arsenate spray residues is removed from apples, pears, etc., by washing or spraying the fruit with a solution of more than 1 lb. (preferably 3 to 5 lbs.) of sodium thiosulphate in a gallon of water for a period of 1 to 10 minutes. The addition of soap or alkali will assist in wetting the fruit and penetrating any oil present. Any thiosulphate capable of dissolving lead arsenate may be used, e. g. potassium, ammonium or calcium thiosulphate, the proportion used being varied according to the molecular weight. After this treatment the fruit is well washed with water and allowed to dry.

1,779,849 (Oct. 28, 1930; appl. May 17, 1924). ATOMIZING AND SPRAYING DEVICE. Robert Lusk, Palms, Calif. - Brogdex Co., Winter Haven, Fla. - A spraying device of the air brush type for applying paraffin in a liquid vehicle to fruit is described.

1,772,880 (Aug. 12, 1930; appl. Jan. 23, 1928). VEGETABLE WASHER. Alfred G. Sueflow and Charles C. Wolford, Milwaukee, Wis. - Feling Tying Machine Co., Milwaukee, Wis. - Vegetables are scrubbed by two sets of rotary brushes the lower of which dip into water and carry it to the vegetables.

1,794,346 (Feb. 24, 1931; appl. Mar. 2, 1925). PREPARATION OF FRESH FRUIT FOR MARKET. Ernest M. Brogden, Santa Monica, and Miles T. Trowbridge, Palms, Calif. - Brogdex Co., Winter Haven, Fla. - In the preparation of fresh fruit for market, the process of protectively treating the fruit for prevention of the blue mold decay and the like, comprises subjecting the fresh fruit to the action of a warm aqueous mold-inhibiting solution possessing a degree of alkalinity at least as high as that equivalent to the employment of 2 ounces of soda ash per gallon of water.

1,794,751 (Mar. 3, 1931; appl. May 27, 1927). METHOD OF AND APPARATUS FOR COATING ARTICLES. George W. Beadle, New York, N. Y. - Cellacote Co., Inc., New York, N. Y. - Fruits, vegetables and the like are coated by this apparatus with a hydrated cellulose (e.g. xanthate cellulose) solution to protect them from decay.

1,795,275 (Mar. 3, 1931; appl. Jan. 18, 1926). PREPARATION OF FRESH FRUIT FOR MARKET. Ernest M. Brogden, Santa Monica, and Miles L. Trowbridge, Palms, Calif. - Brogdex Co., Winter Haven, Fla. - In the preparation of fresh fruit for market, the process of protectively treating the fruit for prevention of blue mold decay and the like comprises subjecting the fresh fruit of a warm aqueous mold-inhibiting solution of an alkaline hydroxide, (e.g. sodium hydroxide) said solution possessing a degree of alkalinity at least as high as that equivalent to the employment of 2 ounces of soda ash per gallon of water.

1,809,736 (June 9, 1931; appl. Mar. 26, 1927; in Germany Dec. 20, 1926). WASHING MACHINE FOR COMESTIBLES. Robert Spidel, Pforzheim, Germany. - This washing machine for fruits, vegetables, etc., consists of a receiver provided with an agitator shaft extending through the bottom and operated by a motor below. Foreign matter passes through a sieve bottom and is discharged with the outflowing water.

1,822,276 (Sept. 8, 1931; appl. Sept. 1, 1928). FRUIT TREATMENT MACHINE AND METHOD. Melville E. Dunkley, San Francisco, Calif. - Rosenberg Bros. and Co., San Francisco, Calif. - A machine for treating partially dehydrated fruit (e.g. raisins) comprises a treatment chamber into which the fruit is introduced, means for effecting a vertical movement of water within said chamber to effect separation of the fruit from foreign solids, and means for removing separated stems and the like solids from said chamber.

1,830,297 (Nov. 3, 1931; appl. May 13, 1929). SPRAYING APPARATUS. Bronson C. Skinner, Dunedin, Fla. - Brogdex Co., Winter Haven, Fla. - Citrus fruit is sprayed with liquid paraffin and then rubbed or brushed to produce a uniform film.

1,841,299 (Jan. 12, 1932; appl. Aug. 4, 1927). PEA GRADER. Charles E. Rife, Baltimore, Md. - Peas are graded and washed in a series of parallel, rotating, cylindrical sieves over which water plays constantly.

1,844,691 (Feb. 9, 1932; appl. June 20, 1930). VEGETABLE WASHER AND CLEANER. Lillian Schneider and Aaron Reich, Brooklyn, N. Y. - Vegetables are washed in a cylindrical container with an agitator detachably fastened to a stud shaft which is rotatively mounted through the cover of the container.

1,847,309 (Mar. 1, 1932; appl. Jan. 21, 1926). VEGETABLE WASHING MACHINE. John Schmidt, Hoopeston, Ill. - Sprague-Sells Corp., Hoopeston, Ill. - This apparatus for washing and grading peas and beans consists essentially of a vibrating screen upon which jets of water are projected downwardly.

1,852,144 (Apr. 5, 1932; appl. Dec. 15, 1924; renewed Mar. 21, 1931). PROTECTION OF FRESH FRUITS AGAINST BLUE MOLD AND THE LIKE. Ernest M. Brogden, Pomona, and Miles L. Trowbridge, Palms, Calif. - Brogdex Co., Winter Haven, Fla. - The process of protecting fresh fruit against blue mold or other rot fungi comprises subjecting the fruit to contact with an aqueous solution of borax and sodium bisulphite, the borax being present in the proportion of from 2 to 4 ounces, and bisulphite in the proportion of 6 to 2 ounces, per gallon of water, and the solution being employed at a temperature insufficiently high to scald or cook the fruit.

1,857,444 (May 10, 1932; appl. Dec. 7, 1927). MACHINE FOR WASHING VEGETABLES. Eugene E. Edenharder, West Allis, Wis. - Helen E. Edenharder and Jacob E. Edenharder. - This invention comprises, in its simplest form, a frame-work adapted to be placed in the top of an open tank containing water, such frame-work being provided with journals in which are mounted for rotation a shaft carrying at its ends circular brush heads, the bristles of which extend in horizontal relation to the shaft, so as to prevent scrubbing faces standing in planes transverse to the axis of the shaft.

1,864,085 (June 21, 1932; appl. Mar. 24, 1928). FRUIT WASHING APPARATUS. Andrew O. Moe, Toppenish, Wash. - Food Machinery Corp., San Jose, Calif. - Fruit is washed on an endless conveyor with weak acid solution, then similarly washed with water, dried and brushed in a current of dry air, and finally brushed with wax.

1,873,220 (Aug. 23, 1932; appl. Feb. 24, 1925). MACHINE FOR GRADING GLOBULAR ARTICLES. Ogden S. Sells, Hoopeston, Ill. - Sprague-Sells Corp., Hoopeston, Ill. - Peas are washed on a screen as they leave a grading machine.

1,875,944 (Sept. 6, 1932; appl. June 9, 1931). PROCESS OF TREATING FRUIT TO REMOVE SPRAY RESIDUES. Jagen N. Sharma, Berkley, Calif. - Food Machinery Corp., San Jose, Calif. - A process of treating fruit, such as apples, to remove spray residues, such as lead arsenate compounds, comprises contacting the fruit with a solution of alkali silicate capable of forming oxy-triarsenate with the lead arsenate of the residue. There is no particular advantage in heating the solution. A 2 percent solution gives satisfactory results.

1,884,966 (Oct. 25, 1932; appl. Feb. 19, 1930). PROCESS FOR THE REMOVAL OF NATURAL OILS, WAX, AND SPRAY RESIDUES FROM FRUITS. Reginald H. Robinson, Corvallis, Ore. - United States Government and People of the U. S. - A process for the removal of natural oils, wax and spray residues, e. g. lead arsenate and other arsenicals, from apples and pears comprises the application to the fresh fruits of a solution of liquid petroleum hydrocarbons, hydro-chloric acid and water, followed by washing with water to remove the cleaning solution and then drying the fruit. Solvents for the natural oil or wax of apples and pears and for residual oils from oil sprays are alcohols such as methyl, ethyl, glycerine and certain of the higher alcohols, acetone, benzol and its higher homologues, various hydrocarbons such as benzene, gasoline and others of different hydrocarbon series, carbon tetrachloride, commercial lacquer solvents, sulphonated oils, chloroform, amyl acetate, carbon disulphide, ether, alkalies, soaps, and various organic acids such as oleic. Since some of these solvents are immiscible with a water solution of hydrochloric acid that is used in the washing process, it is necessary to emulsify them or to make combinations of two or more of the above specified solvents by which an emulsion is formed which can be dispersed through the hydrochloric acid solution. The process of the invention consists in adding any of the solvents or combination of solvents for wax or oil to the hydrochloric acid solution in the tank of the fruit washing machine.

1,885,100 (Oct. 25, 1932; appl. July 11, 1929). PROCESS FOR THE REMOVAL OF SPRAY RESIDUES FROM FRUITS AND VEGETABLES. Reginald H. Robinson, Corvallis, Ore. - United States Government and People of the United States - A process for the removal of spray residues of lead arsenate, calcium arsenate, Bordeaux mixture, etc., from deciduous fruit and vegetables comprises the application to the fruit or vegetables of a water solution of a mixture of 0.1 to 1.0 percent hydrochloric acid and 0.25 to 2.0 percent of certain sulphates, e. g. ferrous sulphate, followed by washing with water and drying.

1,899,606 (Feb. 28, 1933; appl. Mar. 2, 1925). PREPARATION OF FRESH FRUIT FOR MARKET. Ernest M. Brogden, Santa Monica, and Miles L. Trowbridge, Palms, Calif. - Brogdex Co., Winter Haven, Fla. - In the preparation of fresh fruit for market, the process of protecting the same against blue mold decay and the like comprises applying to the fresh fruit an aqueous solution containing alkali-metal oxide radical and boric acid radical in proportions equivalent to the employment of from 2 to 12 ounces of borax and from 2 to 12 ounces of sodium carbonate per gallon of water.

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